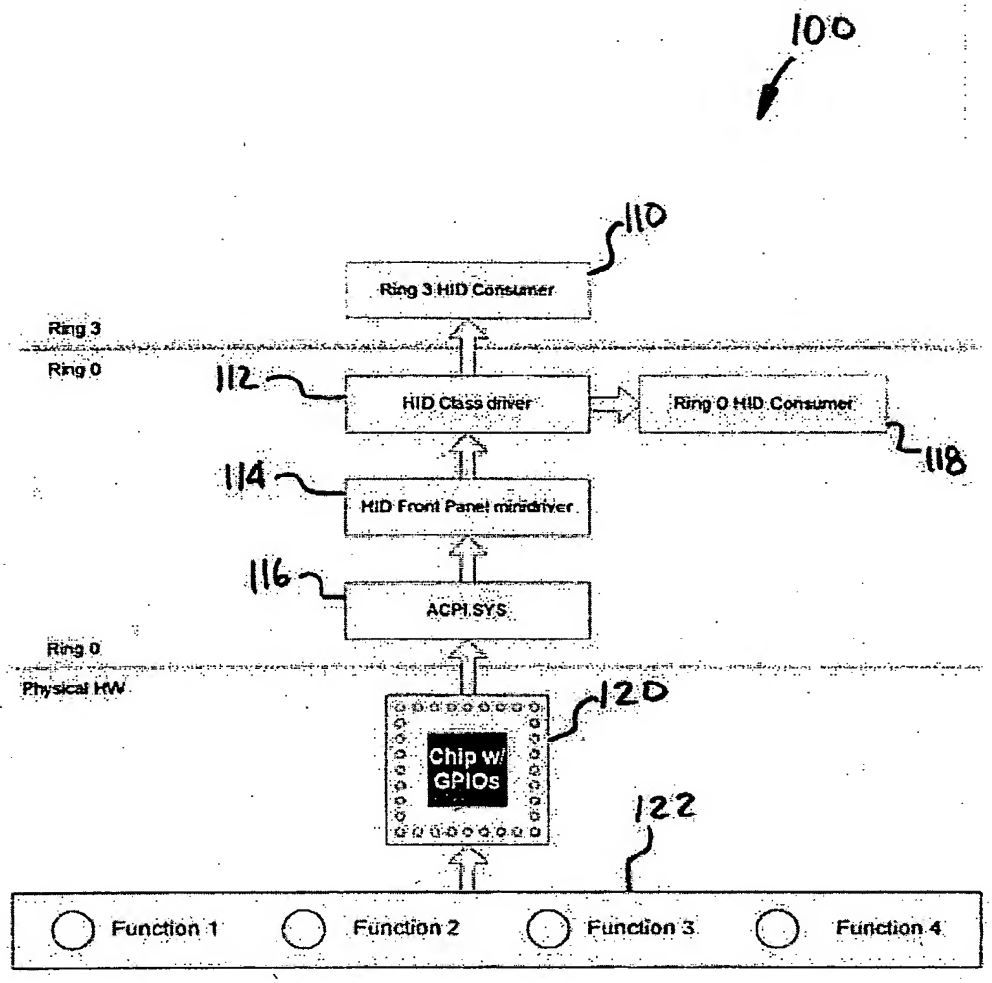
100
110
Ring 3 HID Consumer
Ring 3
Ring 0
112
HID Class driver
Ring 0 HID Consumer
118
114
HID Front Panel minidriver
116
ACPI.SYS
Ring 0
Physical HW
120
Chip w/ GPIOs
122
Function 1
Function 2
Function 3
Function 4

FIG. 1

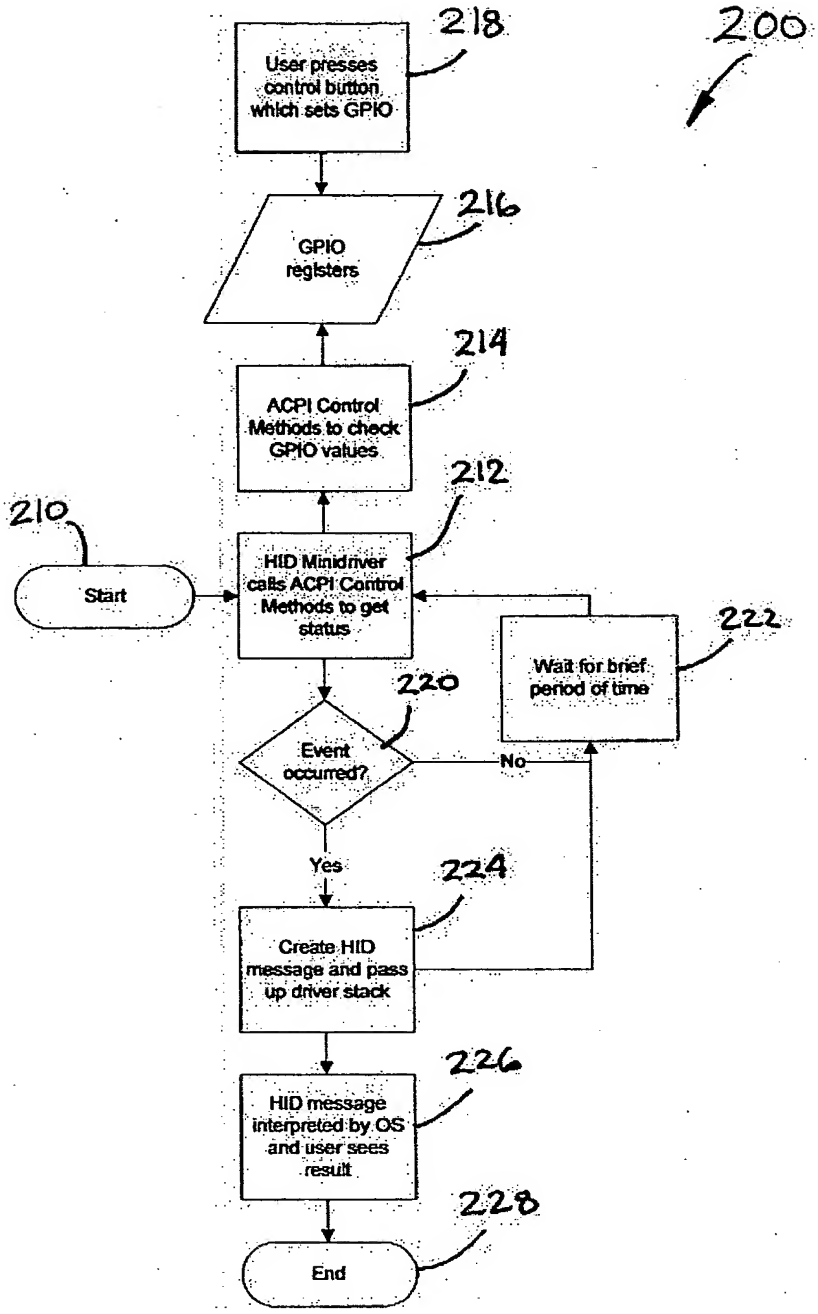
200
218
User presses control button which sets GPIO
216
GPIO registers
214
ACPI Control Methods to check GPIO values
212
210
Start
HID Minidriver calls ACPI Control Methods to get status
222
Wait for brief period of time
220
Event occurred?
No
Yes
224
Create HID message and pass up driver stack
226
HID message interpreted by OS and user sees result
228
End

FIG. 2

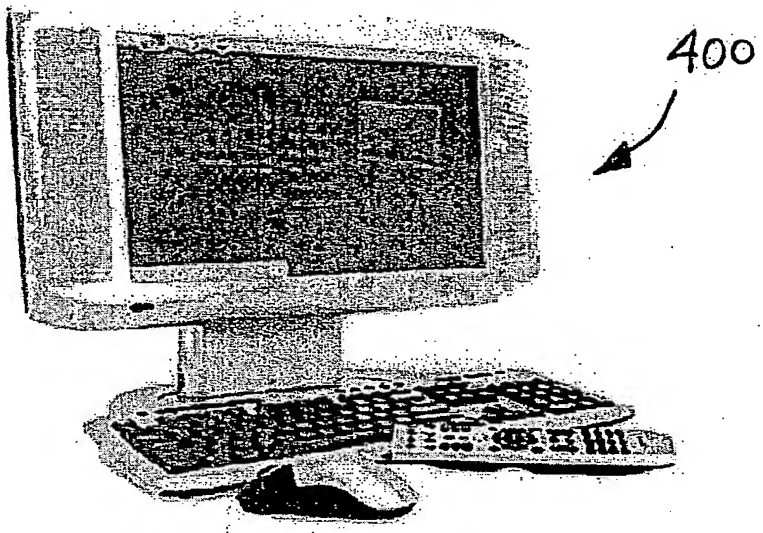


FIG. 3

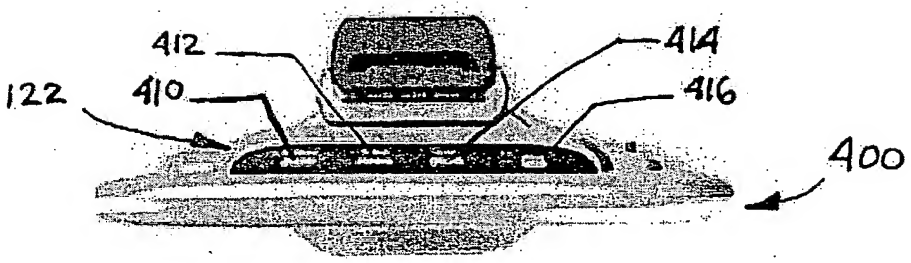


FIG. 4

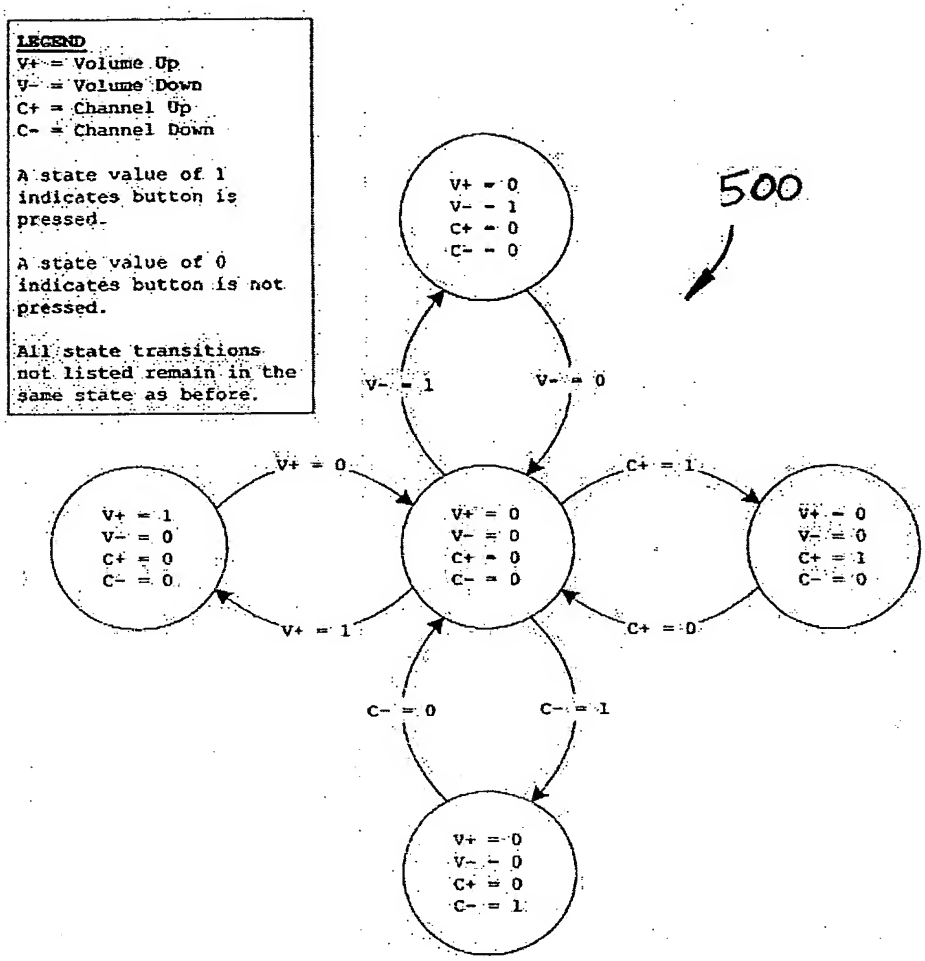
LEGEND
V+ = Volume Up
V- = Volume Down
C+ = Channel Up
C- = Channel Down
A state value of 1 indicates button is pressed.
A state value of 0 indicates button is not pressed.
All state transitions not listed remain in the same state as before.
500
V+ = 0
V- = 1
C+ = 0
C- = 0
V- = 1
V- = 0
V+ = 0
V+ = 1
V- = 0
C+ = 0
C- = 0
C+ = 1
V+ = 0
V- = 0
C+ = 1
C- = 0
V+ = 1
C+ = 0
C- = 0
C- = 1
V+ = 0
V- = 0
C+ = 0
C- = 1

FIG 5